



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH30 119194-1253
Component
Diesel Engine
Fluid
LIEBHERR MOTOROIL 5W-30 LOW ASH (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0243135	LH0229305	LH0190920
Sample Date		Client Info		09 Jun 2023	07 Nov 2022	12 Apr 2022
Machine Age	hrs	Client Info		6258	5125	4163
Oil Age	hrs	Client Info		1039	1052	1041
Filter Age	hrs	Client Info		1039	1052	1041
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>66	6	3	11
Chromium	ppm	ASTM D5185m	>4	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>8	1	0	1
Lead	ppm	ASTM D5185m	>10	<1	<1	▲ 23
Copper	ppm	ASTM D5185m	>74	4	1	10
Tin	ppm	ASTM D5185m	>4	1	<1	1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

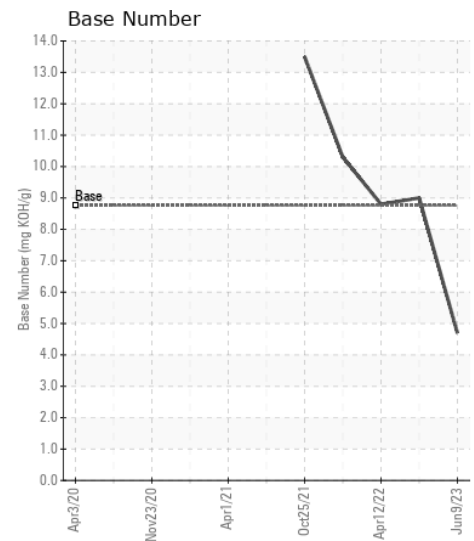
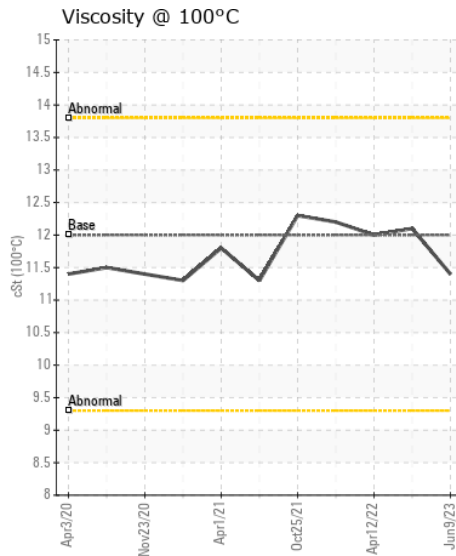
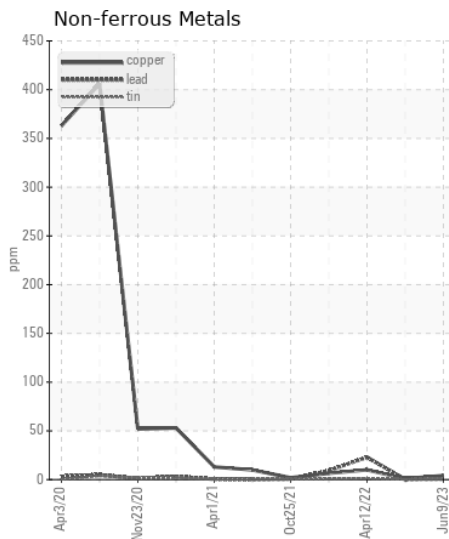
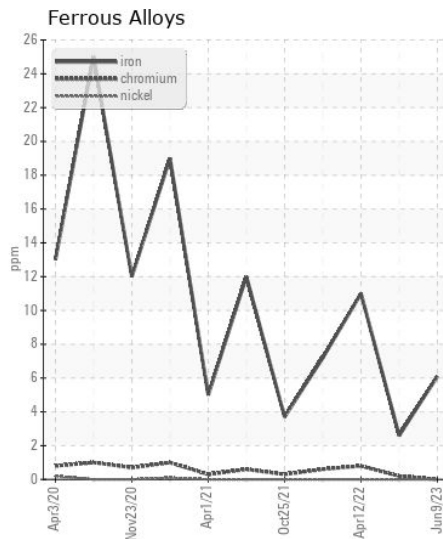
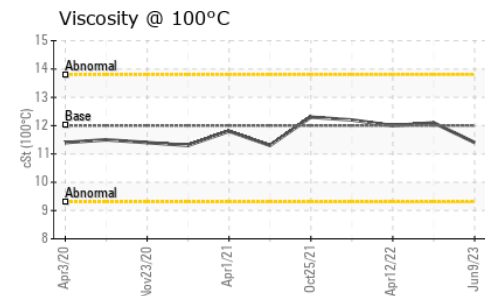
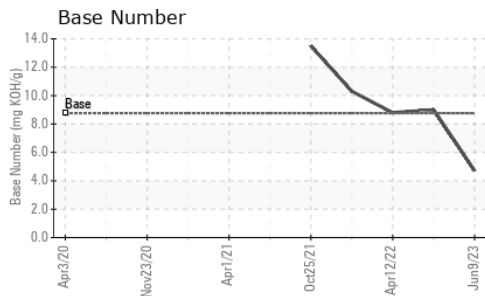
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>15	8	7	5
Potassium	ppm	ASTM D5185m	>20	<1	4	0
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.6	0.1
Nitration	Abs/cm	*ASTM D7624	>20	12.1	8.8	13.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.8	21.4	24.2
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		4	1	0
Boron	ppm	ASTM D5185m	2	35	81	15
Barium	ppm	ASTM D5185m	0	<1	0	0
Molybdenum	ppm	ASTM D5185m	<1	0	<1	<1
Manganese	ppm	ASTM D5185m	<1	<1	<1	<1
Magnesium	ppm	ASTM D5185m	12	628	573	24
Calcium	ppm	ASTM D5185m	2224	1209	1434	2688
Phosphorus	ppm	ASTM D5185m	635	649	689	704
Zinc	ppm	ASTM D5185m	718	669	817	851
Sulfur	ppm	ASTM D5185m	1694	2482	2696	2033
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.2	17.7	23.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.76	4.7	9.0	8.8
Visc @ 100°C	cSt	ASTM D445	12.0	11.4	12.1	12.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0243135 **Received** : 23 Feb 2024
Lab Number : 06098234 **Tested** : 26 Feb 2024
Unique Number : 10896464 **Diagnosed** : 26 Feb 2024 - Don Baldrige
Test Package : CONST (Additional Tests: TBN)

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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